

1 ENERGY AND ENVIRONMENT CABINET

2 Department for Environmental Protection

3 Division of Waste Management

4 (Amended After Comments)

5 401 KAR 42:040. UST system release detection.

6 RELATES TO: KRS 224.10, 224.60, 40 C.F.R. Part 280 Subpart D, [~~Part 281~~,]42

7 U.S.C. 6991c, 42 U.S.C. 6991k, 42 U.S.C. 6991e

8 STATUTORY AUTHORITY: KRS 224.10-100, 224.60-105, 42 U.S.C. 6991k, 42

9 U.S.C. 6991e[~~40 C.F.R. Part 280 Subpart D, Part 281~~, 42 U.S.C. 6991e]

10 NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the
11 cabinet[~~Environmental and Public Protection Cabinet~~] to develop and conduct programs that
12 provide for the prevention, abatement, and control of contaminants that may threaten the
13 environment. KRS 224.60-105 requires the cabinet to regulate underground storage tanks[~~tank~~
14 (~~UST~~)-~~systems~~] by requiring registration, minimum construction and performance standards,
15 leak detection, recordkeeping, release reporting, corrective action, closure, financial
16 responsibility, and other requirements[~~standards~~] to protect public health and the environment.
17 KRS 224.60-105(3) requires the cabinet to establish a regulatory program that implements
18 federal requirements for UST systems. [~~401 KAR Chapter 42 identifies requirements for UST~~
19 ~~systems.~~] This administrative regulation establishes the requirements for UST system release
20 detection and recordkeeping.

1 Section 1. General requirements for all UST systems. General requirements for all UST
2 systems shall be as established in 40 C.F.R. 280.40.

3 Section 2. Requirements for petroleum UST systems. Requirements for petroleum UST
4 systems shall be as established in 40 C.F.R. 280.41.

5 Section 3. Requirements for hazardous substance UST systems. Requirements for
6 hazardous substance UST systems shall be as established in 40 C.F.R. 280.42.

7 Section 4. System Integrity Testing and Reporting. (1)[Section 1. Application of Federal
8 Regulations. (1) The requirements for UST system release detection and recordkeeping for UST
9 systems are governed by 40 C.F.R. Part 280 Subpart D and this administrative regulation.

10 ~~(2) The documents incorporated by reference in Section 3 of this administrative~~
11 ~~regulation shall be used in meeting the requirements of subsection (1) of this section.~~

12 ~~(3)] The [results of the] following tests shall be performed in accordance with the~~
13 ~~equipment manufacturer's instructions, 401 KAR 42:020, 42:030 and this administrative~~
14 ~~regulation[required by 40 C.F.R. Part 280 Subpart D shall be submitted to the cabinet within~~
15 ~~thirty (30) days of the test completion]:~~

16 (a) [Annual] Line Tightness Test [for Pressurized Piping];

17 (b) Automatic[Annual Operational] Line Leak Detector Test;

18 (c) Operational Test of Electronic Release Detection Monitoring Equipment; and

19 (d)[(e) Five (5)-year] Tank Tightness Test; [and

20 (d) Tri-annual Line Tightness Test for American Suction Piping.]

21 (2)(a) Results of a test conducted in accordance with subsection (1) of this section shall
22 be submitted on:

23 1. For line tightness tests: "Line Tightness Test", DEP 4064;

1 2. For automatic line leak detector test: "Automatic Line Leak Detector Operational
2 Test", DEP 4062;

3 3. For operational test of electronic release detection monitoring equipment: "Electronic
4 Release Detection Equipment Test", DEP 4063; and

5 4. For tank tightness test: "Tank Tightness Test", DEP 4066;

6 (b) Results for a test conducted in accordance with subsection (1) of this section may be
7 submitted on a standardized form provided by the testing equipment manufacturer if the form
8 contains, at a minimum, the same information as the form listed in paragraph (a) of this
9 subsection.

10 (3)(a) Owners and operators shall immediately report to the cabinet, as a suspected
11 release in accordance with 401 KAR 42:050, failing results of a test performed in accordance
12 with subsection (1) of this section.

13 (b) All documentation of failing test results shall be submitted to the Underground
14 Storage Tank Branch within seven (7) days of the test date.

15 (c) All documentation of passing test results shall be submitted to the Underground
16 Storage Tank Branch within thirty (30) days of the test date.

17 Section 5. Tank and Line Tightness and Line Leak Detector Testers. (1) Owners and
18 operators shall ensure that tests of tanks and piping for tightness and operational tests of
19 automatic line leak detectors are conducted by a person who meets the following requirements:

20 (a) Uses testing equipment and methods that are certified, as of the time of testing, by an
21 independent third-party evaluator;

22 (b) Has completed a training course conducted or endorsed by the manufacturer of the
23 testing equipment;

1 (c) Maintains training credentials as prescribed by the manufacturer of the testing
2 equipment; and

3 (d) Provides a copy of their training credentials to the cabinet upon request.

4 (2) Failure to provide credentials as established in subsection (1)(d) of this section, upon
5 written request from the cabinet, shall render the test results invalid.

6 Section 6. Methods of release detection for tanks and piping. (1) Effective April 1, 2012,
7 methods of release detection for tanks and piping installed prior to April 1, 2012 shall be as
8 established in 40 C.F.R. 280.43 (b), (c), (d), (g), (h), and 280.44;

9 (2) Owners and operators may use automatic tank gauging (ATG) or statistical inventory
10 reconciliation (SIR) as a release detection method for tanks installed, prior to April 1, 2012,
11 provided that the SIR method is certified, as of the time of testing, by an independent third-party
12 evaluator.

13 (3)(a) In accordance with the UST System Installation and Maintenance Outline,
14 electronic interstitial monitoring shall be the primary method of release detection for all UST
15 systems installed after April 1, 2012.

16 (b) Owners and operators shall only install electronic devices which are capable of
17 printing sensor readings. Owners and operators shall obtain a record, at least once every thirty
18 (30) days, to verify that release detection is being performed and that releases have not occurred.

19 (4) For UST systems installed prior to April 1, 2012 for which the owner or operator has
20 established [electronic] interstitial monitoring as the primary method of release detection:

21 (a) For electronic devices which are capable of printing sensor readings, owners and
22 operators shall obtain a record, at least once every thirty (30) days, to verify that release
23 detection is being performed and that releases have not occurred; or

1 (b) For [electronic] devices which are not capable of printing sensor readings, a monthly
2 log shall be maintained and documented on Visual Interstitial Log, DEP 5041, to verify that
3 release detection is being performed and that releases have not occurred.

4 (5) All release detection records for the most recent monthly verification, and for the
5 preceding twelve (12) months, shall be maintained.

6 (6) All electronic release detection monitoring equipment for the UST system shall be
7 operationally tested annually in accordance with the equipment manufacturer's instructions or a
8 recognized industry standard that is no less stringent than the manufacturer's instructions
9 [and be capable of detecting a leak rate equivalent to one-tenth (0.1) gallons per hour].

10 (a) The test shall be performed by a person utilizing testing equipment and methods that
11 are certified, as of the time of testing, by an independent third-party evaluator; and

12 (b) A copy of the tester's training credentials shall be provided to the cabinet upon
13 request.

14 (7) Owners and operators shall not remove, alter, or disable release detection monitoring
15 equipment, required to be maintained under this administrative regulation, in a manner that
16 would render the equipment inaccurate or inoperable.

17 Section 7. Line Leak Detectors. (1) All pressurized piping systems shall be equipped with
18 an automatic line leak detector (ALLD).

19 (2)(a) All ALLDs shall be performance-tested annually by a qualified individual meeting
20 the requirements of Section 5 of this administrative regulation.

21 (b) All ALLD performance-testing shall be simulated at the dispenser located furthest
22 away from the ALLD or at the highest elevation above the ALLD.

1 (c) All ALLDs shall be installed within the UST system during the test as it would be
2 during normal operation.

3 (d) For electronic line leak detectors, the performance test shall verify that the automatic
4 line leak detector will shut down the Submersible Turbine Pump (STP) and is capable of
5 detecting a leak rate equivalent to three (3) gallons-per-hour at ten (10) pounds per square inch of
6 line pressure.

7 (e) For mechanical line leak detectors, the performance test shall verify that the automatic
8 line leak detector will be capable of detecting a leak rate equivalent to three (3) gallons-per-hour
9 at ten (10) pounds per square inch of line pressure while reducing the flow [in accordance with
10 manufacturer's recommendation]. In addition, the test shall verify that the STP relay switch is
11 not malfunctioning permanently in the on position, which would prevent the mechanical line leak
12 detector from operating properly.

13 Section 8. Release detection recordkeeping. Requirements for release detection
14 recordkeeping shall be as established in 40 C.F.R. 280.45.

15 Section 9.[2.] Extensions. (1) The owner or operator of a UST system may request an
16 extension to a deadline established by this administrative regulation or established by the cabinet
17 in writing pursuant to this administrative regulation.

18 (2) The extension request shall be submitted in writing and received by the Division of
19 Waste Management prior to the deadline.

20 (3) The cabinet may grant an extension if the cabinet determines that an extension would
21 not have a detrimental impact on human health or the environment.[The owner or operator of a
22 UST system may request extension of the time frame for reports required by this administrative
23 regulation. The extension request shall be submitted in writing and received by the Underground

1 ~~Storage Tank Branch of the Division of Waste Management prior to the deadline. The cabinet~~
2 ~~may grant extensions, if the cabinet determines that an extension would not have a detrimental~~
3 ~~impact on human health or the environment.]~~

4 Section 8[3]. Incorporation by Reference. (1) The following material is incorporated by
5 reference:

6 (a) "Automatic Line Leak Detector", DEP4062, (July[April] 2011);

7 (b) "Line Tightness Test", DEP 4064, (April 2011);

8 (c) "Tank Tightness Test", DEP 4066, (April 2011);

9 (d) "Electronic Release Detection Equipment Test", DEP 4063 (April 2011); and

10 (e) "Visual Interstitial Log", DEP 5041, (April 2011).

11 ~~["Site Assessment Outline for External UST System Release Detection Methods~~
12 ~~(Groundwater, Vapor, and Interstitial Monitoring)" (August 2006); and~~


13 ~~(b) "External UST System Release Detection Well Form", DEP Form 8051 (January~~
14 ~~2006).]~~

15 (2)(a) This material may be inspected, copied, or obtained, subject to copyright law, at
16 the Underground Storage Tank Branch, 200 Fair Oaks Lane, Second Floor[~~81 C. Michael~~
17 ~~Davenport Blvd.~~], Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m.

18 (b) This material is also available on the[(3) ~~This material may also be obtained by~~
19 ~~calling the~~] Division of Waste Management's Web site at http://waste.ky.gov.[~~Management at~~
20 ~~(502) 564-5981 or on the division's Web page located at www.waste.ky.gov.~~]

401 KAR 42:040 approved for filing.

7/13/11
Date


Leonard K. Peters, Secretary
Energy and Environment Cabinet

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Contact Person: Cassandra Jobe

(1) Provide a brief summary of:

(a) What this administrative regulation does:

This administrative regulation establishes the requirements for UST system release detection and recordkeeping.

(b) The necessity of this administrative regulation:

This administrative regulation is necessary to establish the requirements for UST system release detection and recordkeeping.

(c) How this administrative regulation conforms to the content of the authorizing statutes:

This administrative regulation conforms to the content of the authorizing statutes by establishing requirements for leak detection and record keeping.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes:

This administrative regulation assists in the effective administration of the statutes by establishing requirements for leak detection and record keeping.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation:

The amendment changes the standardized form, and allows flexibility for testing requirements.

(b) The necessity of the amendment to this administrative regulation:

This amendment is necessary to allow for standard industry practices to be used when conducting testing.

(c) How the amendment conforms to the content of the authorizing statutes:

This amendment conforms to the content of the authorizing statutes by allowing for testers to use standard industry practices when conducting testing.

(d) How the amendment will assist in the effective administration of the statutes:

This amendment will assist in the effective administration of the statutes by allowing for standard industry practices to be used during testing.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation:

There are approximately 3,700 registered UST facilities in Kentucky.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment:

Regulated entities will have to conduct testing and submit results to the agency.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3):

The requirement already exists to conduct the test. It should not cost additional money to submit results to the agency.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3):

Conducting testing in accordance with this amendment should give owners an idea about the status of releases from the UST system.

(5) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially:

It will not cost the agency additional money to implement this amendment.

(b) On a continuing basis:

It will not cost the agency additional money to implement this amendment.

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation:

This amendment will be implemented and enforced with funding from tank fees and the US EPA.

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment:

An increase in fees is not necessary to implement this amendment.

(8) State whether or not this administrative regulation established any fees or directly or indirectly increased any fees:

This amendment does not establish or affect any fees.

(9) TIERING: Is tiering applied? (Explain why or why not)

Tiering is not applied. The testing requirements are the same.

FISCAL NOTE ON STATE OR LOCAL GOVERNMENT

Regulation No. 401 KAR 42:040

Contact Person: Cassandra Jobe

1. Does this administrative regulation relate to any program, service, or requirements of a state or local government (including cities, counties, fire departments, or school districts)?

Yes X No

If yes, complete questions 2-4.

2. What units, parts or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation?

The Division of Waste Management

3. Identify each state or federal statute or federal regulation that requires or authorizes the action taken by the administrative regulation.

KRS 224.60-105; 40 C.F.R. 280 Subpart D; 42 U.S.C. 6991k, 42 U.S.C. 6991e

4. Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the administrative regulation is to be in effect.

(a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year?

This amendment does not generate revenue.

(b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years?

This amendment does not generate revenue.

(c) How much will it cost to administer this program for the first year?

There will be no additional costs to the agency to implement this amendment.

(d) How much will it cost to administer this program for subsequent years?

There will be no additional costs to the agency to implement this amendment.

Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impact of the administrative regulation.

Revenues (+/-):

Expenditures (+/-):

Other Explanation:

FEDERAL MANDATE ANALYSIS COMPARISON

1. Federal statute or regulation constituting the federal mandate.

40 C.F.R. 280 Subpart D; 42 U.S.C. 6991k, 42 U.S.C. 6991e

2. State compliance standards.

KRS 224.60-105

3. Minimum or uniform standards contained in the federal mandate.

40 C.F.R. 280 Subpart D; 42 U.S.C. 6991k, 42 U.S.C. 6991e

4. Will this administrative regulation impose stricter requirements, or additional or different responsibilities or requirements, than those required by the federal mandate?

No.

5. Justification for the imposition of the stricter standard, or additional or different responsibilities or requirements.

Not applicable.

Detailed Summary of Material Incorporated by Reference

I. This administrative regulation incorporates by reference the "Automatic Line Leak Detector Operational Test", DEP 4062, (July 2011). This document has been revised to be more consistent with standard practices. It is to be submitted to document the results of automatic line leak detector tests.

This document consists of 8 pages.

II. This administrative regulation incorporates by reference the "Line Tightness Test", DEP 4064, (April 2011). This document is to be used to submit results of line tightness tests.

This document consists of 1 page.

III. This administrative regulation incorporates by reference the "Tank Tightness Test", DEP 4066, (April 2011). This document is to be used to submit results of tank tightness tests.

This document consists of 1 page.

IV. This administrative regulation incorporates by reference the "Electronic Release Detection Equipment Test", DEP 4063, (April 2011). This document is to be used to submit results of electronic release detection equipment tests.

This document consists of 1 page.

V. This administrative regulation incorporates by reference the "Visual Interstitial Log", DEP 5041, (April 2011). This document is to be used to document results of interstitial monitoring.

This document consists of 1 page.

STATEMENT OF CONSIDERATION RELATING TO

401 KAR 42:040

Amended After Comments

Energy and Environment Cabinet
Department for Environmental Protection
Division of Waste Management

I. A public hearing on 401 KAR 42:040 was held on May 24, 2011 at 10:00 a.m. in Conference Room 301 D at 300 Fair Oaks Lane, Frankfort, Kentucky, 40601. No verbal comments were received on 401 KAR 42:040.

II. The following people submitted written comments:

<u>Name and Title</u>	<u>Affiliation</u>
Richard Maxedon, President	Kentucky Petroleum Marketers Association
Rob Daniell, Manager	Underground Storage Tank Branch

III. The following people responded to comments:

<u>Name and Title</u>	<u>Affiliation</u>
Anthony Hatton, Director	Division of Waste Management
Rob Daniell, Manager, UST	Division of Waste Management
Cassandra Jobe, Supervisor, PPA	Division of Waste Management

IV. Summary of Comments and Responses

(1) Subject Matter: Electronic release detection rates.

(a) Comment: Richard Maxedon, Kentucky Petroleum Marketers Association (KPMA).

401 KAR 42:040 Section 6(6), states "All electronic release detection equipment for the UST system shall be operationally tested annually in accordance with the equipment manufacturer's instructions and be capable of detecting a leak rate equivalent to one-tenth (0.1) gallons-per-hour." We feel that this requirement should be more accurately stated as "all release detection monitoring equipment for the UST system shall be operationally tested annually in accordance with the equipment manufacturer's instructions or a recognized standard."

(b) Response:

The Division agrees. The language in 401 KAR 42:040, Section 6(6) has been adjusted accordingly.

(2) Subject Matter: Interstitial Monitoring.

(a) Comment: Rob Daniell, Underground Storage Tank Branch

Not all interstitial monitoring is electronic. All interstitial monitoring that is not electronic should be required to use the Visual Interstitial Log form.

(b) Response:

The division agrees. The word 'electronic' has been removed to clarify this in Section 6(4).

(3) Subject Matter: Automatic Line Leak Detector Operation Test

(a) Comment: Rob Daniell, Underground Storage Tank Branch

The form for recording Automatic Line Leak Detector Operational Test could be streamlined.

(b) Response:

The division agrees. The form has been revised to include instructions and to be more consistent with the other forms.

V. Summary of Action Taken by Promulgating Agency

401 KAR 42:040: Comments were considered and the following changes are suggested:

Page 4

Section 6(4)

Line 20

After "established", delete "electronic".

Page 5

Section 6(4)(b)

Line 1

After "for", delete "electronic".

Page 5

Section 6(6)

Line 7

After "manufacturer's instructions", insert, "or a recognized industry standard that is no less stringent than the manufacturer's instructions".

Page 6

Section 7(2)(e)

Lines 7-8

After "reducing the flow", delete "in accordance with the manufacturer's recommendations".

The following changes were made to the form, which was filed with the Amended After Comments version of the administrative regulation:

“Automatic Line Leak Detector Operational Test” was revised to include instructions and a more user friendly format.